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EXAMINER

NGUYEN, TU X

ART UNIT PAPER NUMBER

2684

DATE MAILED: 05/09/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/020,336

Applicant(s)

HACK ET AL.

Examiner

Tu X Nguyen

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— The MAILING DATE of this communication appears on the cover sheet with the correspondence address —

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 29 March 2005.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-51 is/are pending in the application.
- 4a) Of the above claim(s) 52-55 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-14 and 18-51 is/are rejected.
- 7) ☒ Claim(s) 15-17 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Response to Amendment

1 In view of the Declaration filed on 3/18/05 under 37 CFR 1.131, with respect to claims 1-51, have been considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 102

2 The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3 Claims 1, 4-5, 18-19 and 25 are rejected under 35 U.S.C. 102(e) as being anticipated by Peuhu et al. (US Patent 6,311,076).

Regarding claim 1, Peuhu et al. disclose a display communication device comprising:

a housing (see 1, fig.1) that contains a processor (see col.3 lines 29-30, "electrical components" which inherent comprising processor for mobile communications)

means, coupled to the processor, for receiving input radio signals (see 2, fig.1);
and

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a collapsible display that is mechanically coupled to an interior of the housing (see col.1 lines 44-45) and electrically coupled to the processor,

wherein the display is collapsible into the interior of the housing has a viewable surface area that is larger than any cross-sectional area taken through the housing (see fig.2).

Regarding claim 18, Peuhu et al. disclose a locking mechanism for holding the display in an extend position (see col.3 lines 49-55).

Regarding claim 19, Peuhu et al. disclose a foldable display and a first end of the display is coupled to the housing such that the display can be folded into the interior of the housing (see col.3 lines 34-55).

Regarding claims 4-5 and 25, Peuhu et al. disclose the display processore, memory, speaker microphone is contained in the housing (1, fig.1, conventional mobile phone is inherent comprising processor, memory, speaker and microphone for communication and memory for example, dial phone number).

Claim Rejections - 35 USC § 103

4 The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5 Claims 2-3 and 20-21, are rejected under 35 U.S.C. 103(a) as being unpatentable over Peuhu et al. in view of Hillenmayer (US Patent 5,719,936).

Regarding claims 2-3 and 20-21, Peuhu et al. fail to disclose means for transmitting output radio signals, and the processor is further adapted to receive commands from the display and to form the output radio signals based on the received commands.

Hillenmayer discloses means for transmitting output radio signals, and the processor is further adapted to receive commands from the display and to form the output radio signals based on the received commands (see col.4 lines 36-37). Therefore, It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the system of Peuhu et al. with the above teaching of Hillenmayer in order to provide touch-sensitive display as a keyboard to receive input from the user.

Regarding claim 10, Peuhu et al. fail to disclose the housing contains a low voltage power supply.

Hillemayer discloses the housing contains a low voltage power supply (see col.30-31). Therefore, It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the system of Peuhu et al. with the above teaching of Hillemayer in order to provide internal battery without a need of external battery.

6 Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Peuhu et al.

Regarding claim 6, Peuhu et al. fail to disclose the processor is adapted to form the output radio signals by modulating a carrier signal with a representation of the input audio signal. An Official notice is taken that the concepts of modulating signals before transmit are well known in the art. It would have been obvious to one of ordinary skill in the art at the time the invention an audio signals being modulated into higher frequency in order to transmit signals in an air-interface communications.

7 Claims 7-9 and 35-36, are rejected under 35 U.S.C. 103(a) as being anticipated by Peuhu et al. (US Patent 6,311,076) in view of Shiraishi et al. (US Patent 6,809,724).

Regarding claims 7 and 35-36, Peuhu et al. fail to disclose the device is voice activated.

Schultheiss discloses voice activated (see col.5 lines 50-51). Therefore, It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the system of Peuhu et al. with the above teaching of Shiraishi et al. in order to provide hand-free operation.

Regarding claim 8, the modified Peuhu et al. disclose the processor is adapted to from output radio signals that initiate a connection between the communications device and a remote network device (see Schultheiss, 100, fig.2).

Regarding claim 9, the modified Peuhu et al. disclose the processor is adapted to connected to the Internet (see Schulteiss, 18b, fig.2).

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8 Claim 11 is rejected under 35 U.S.C. 103(a) as being unpatentable over Peuhu et al. in view of Dodabalapur et al. (US Patent 6,384,804) and further in view of Comiskey et al. (US Patent 6,459,418).

Regarding claim 11, the combine Peuhu et al. and Dodabalapur et al. disclose everything as claim 42 above. However, the combine Dowling et al. and Dodabalapur et al. fail to disclose the power supply is a thin film power supply.

Comiskey et al. disclose a thin film battery (see col.15, lines 49-50). Therefore, It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the system of the combine Peuhu et al. and Dodabalapur et al with the above teaching of Comiskey et al. in order to provide a thin film battery for higher current density, higher battery efficiency, easier to vary the shape and size of batteries for particular purposes.

9 Claim 12 is rejected under 35 U.S.C. 103(a) as being unpatentable over Peuhu et al. in view of Gildea et al. (US Patent 5,589,835).

Regarding claim 12, Peuhu et al. fail to disclose the means for receiving input radio signals is a smart antenna.

Gildea et al. disclose the means for receiving input radio signals is a smart antenna (see col.3 lines 60-61). Therefore, It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the system of Peuhu et al. with the above teaching of Gildea et al. in order to provide a GPS smart antenna to determine a geographical location of the mobile device.

10 Claims 13, 29 and 49, are rejected under 35 U.S.C. 103(a) as being anticipated by Peuhu et al. (US Patent 6,311,076) in view of Shiraishi et al. (US Patent 6,809,724).

Regarding claims 13, 29 and 49, Peuhu et al. fail to disclose third generation digital radio standards and video.

Shiraishi et al. disclose third generation digital radio standards and video (see col.1 lines 20-28). Therefore, It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the system of Peuhu et al. with the above teaching of Shiraishi et al. in order to provide high-speed broadband data transmission and processing.

11 Claims 14 and 42, are rejected under 35 U.S.C. 103(a) as being unpatentable over Peuhu et al. in view of Dodabalapur et al. (US Patent 6,384,804).

Regarding claim 14, Peuhu et al. fail to disclose the display comprises a plurality of smart pixels.

Dodabalapur et al. disclose the display comprise a plurality of smart pixels (see col.2 lines 19-20). Therefore, It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the system of Peuhu et al. with the above teaching of Dodabalapur et al. in order to store one or more characteristics of each smart pixel, and to make, if indicated by the result of the measurements, a change in the control voltage such that substantially all smart pixels have substantially the same

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light emissions for a given signal provided to the display apparatus, as suggested by Dodabalapur et al. (see col.3 lines 41-47).

Regarding claim 42, Peuhu et al. fail to disclose the display is an organic light emitting diode display and the power supply is a thin film power supply.

Dodabalapur et al. disclose an organic light emitting diode display (see col.2 lines 10-11). Therefore, It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the system of Peuhu et al. with the above teaching of Dodabalapur et al. in order to provide an OLED display, advantages of simpler structures, excellent operating temperature, high contrast, and a wide viewing angle, and have the beneficial characteristics of light-emitting diodes (LEDs).

12 Claims 22-23 rejected under 35 U.S.C. 103(a) as being unpatentable over Peuhu et al. in view of Nagai (US Pub. 2002/0068619).

Regarding claims 22-23, Peuhu et al. fail to disclose display memory for storing display data that corresponds to information currently being displayed.

Nagai discloses display memory for storing display data that corresponds to information currently being displayed (see par.0032). Therefore, It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the system of Peuhu et al. with the above teaching of Nagai in order to provide when the phone is in different mode (as suggested by Nagai, see par. 0038).

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13 Claim 24 is rejected under 35 U.S.C. 103(a) as being unpatentable over Peuhu et al. in view of Nagai (US Pub. 2002/0068619) and further in view of Howard et al. (US Patent 6,778,180).

Regarding claim 24, Peuhu et al. and Nagi fail to disclose each pixel includes a processor and a memory that contains a pixel address associated with the pixel.

14 Howard et al. disclose a processor and a memory that contains a pixel address associated with the pixel (see col.5 lines 11-12). Therefore, It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the system of Peuhu et al. and Nagai with the above teaching of Howard et al. in order to provide a DSP generates pixel memory locations with corresponding address in image memory.

15 Claims 26-28 are rejected under 35 U.S.C. 103(a) as being anticipated by Peuhu et al. (US Patent 6,311,076) in view of Shiraishi et al. (US Patent 6,809,724).

Regarding claims 26, Peuhu et al. fail to disclose the display is removably coupled to the housing.

Shim et al. disclose the display is removably coupled to the housing (see col.3 lines 44-45). Therefore, It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the system of Peuhu et al. with the above teaching of Shiraishi et al. in order to provide

Regarding claim 27, Peuhu et al. fail to disclose the display is adapted to be removably coupled to each of a plurality of different types of external devices.

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Shim et al. et al. disclose the display is adapted to be removably coupled to each of a plurality of different types of external devices (see col.4 lines 1-2). Therefore, It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the system of Peuhu et al. with the above teaching of Shim et al. in order to provide removable display to be used with other conventional radiotelephone.

Regarding claim 28, the modified Peuhu et al. disclose the display is adapted to automatically configure to the external device to which is coupled (see Shim et al., col.1 lines 59-60).

16 Claims 30-31 and 37 rejected under 35 U.S.C. 103(a) as being unpatentable over Peuhu et al. in view of Want et al. (US Patent 6,628,447).

Regarding claims 30-31, Peuhu et al. fail to disclose the display includes a plurality of bistable pixels, pixel address.

Want et al. disclose the display includes a plurality of bistable pixels, pixel address (see col.2 lines 10-11, col.5 lines 39-40). Therefore, It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the system of Peuhu et al. with the above teaching of Want et al. in order to provide array pixels controlling individual pixel.

Regarding claim 37, Peuhu et al. fail to disclose the display comprises a plurality of self-configurable pixels.

Want et al. discloses the display comprises a plurality of self-configurable pixels (see col.8 lines 14-30). Therefore, It would have been obvious to one of ordinary skill in

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the art at the time the invention was made to modify the system of Peuhu et al. with the above teaching of Want et al. in order to provide depending on ambient lighting, available power the LCD display arrays with self-configurable bistable pixels (as suggested by Want et al., see col.2 lines 24-37).

17 Claim 32 is rejected under 35 U.S.C. 103(a) as being unpatentable over Peuhu et al. in view of Kang et al. (US Patent 5,452,092).

Regarding claim 32, Peuhu et al. fail to disclose compare a current image with a previous image, to identify one or more pixels having a pixel brightness that needs to be changed to convert the display from the previous image to the current image, and to provide the display with display data that causes the pixel brightness of the one or more identified pixels to change.

Kang et al. disclose compare a current image with a previous image, to identify one or more pixels having a pixel brightness that needs to be changed to convert the display from the previous image to the current image, and to provide the display with display data that causes the pixel brightness of the one or more identified pixels to change (see col.4 lines 37-66). Therefore, It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the system of Peuhu et al. with the above teaching of Kang et al. in order to provide a changing pixel detector between previous line and a current line of data.

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18 Claim 33 is rejected under 35 U.S.C. 103(a) as being unpatentable over Peuhu et al. in view of Su (US Pub. 2003/0078082).

Regarding claim 33, Peuhu et al. fail to disclose the processor includes a microprocessor.

Su discloses the processor includes a microprocessor (see par.031). Therefore, It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the system of Peuhu et al. with the above teaching of Su in order to provide plurality of functions other than display.

19 Claim 34 is rejected under 35 U.S.C. 103(a) as being unpatentable over Peuhu et al. in view of Hermanns et al. (US Patent 6,107,980).

Regarding claim 34, Peuhu et al. fail to disclose local processing power for each pixel.

Hermanns et al. disclose local processing power for each pixel (see col.4 lines 50-51). Therefore, It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the system of Peuhu et al. with the above teaching of Hermanns et al. in order to provide the amplifier to provide a sufficiently large charge as is required to switch the liquid crystal while preventing a decrease of held pixel voltage caused by the switching of the high polarization liquid crystal (as suggested by Hermanns et al., see col.3 lines 59-61).

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20 Claim 38 is rejected under 35 U.S.C. 103(a) as being unpatentable over Peuhu et al. in view of Howard et al. (US Patent 6,778,180).

Regarding claim 38, Peuhu et al. fail to disclose each pixel includes a processor and a memory that contains a pixel address associated with the pixel.

Howard et al. disclose a processor and a memory that contains a pixel address associated with the pixel (see col.5 lines 11-12). Therefore, It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the system of Peuhu et al. with the above teaching of Howard et al. in order to provide a DSP generates pixel memory locations with corresponding address in image memory.

21 Claim 39 is rejected under 35 U.S.C. 103(a) as being unpatentable over Peuhu et al. in view of Howard et al and further in view of Want et al. (US Patent 6,628,447).

Regarding claim 39, the modified Peuhu et al. and Howard et al. fail to disclose the pixels are adapted to configure themselves with respect to grayscale and resolution.

Want et al. disclose the pixels are adapted to configure themselves with respect to grayscale and resolution (see col.1 lines 52-53). Therefore, It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the system of Peuhu et al. with the above teaching of Want et al. in order to provide depending on ambient lighting, available power the LCD display arrays with self-configurable bistable pixels (as suggested by Want et al., see col.2 lines 24-37).

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22 Claims 40-41 are rejected under 35 U.S.C. 103(a) as being unpatentable over Peuhu et al. in view of Jacobson et al. (US Patent 6,445,489).

Regarding claims 40-41, Peuhu et al. fail to disclose the pixels include groups of sub-pixels, and each sub-pixel includes a numbers of light emitting devices.

Jacobson et al. disclose the pixels include groups of sub-pixels, and each sub-pixel includes a numbers of light emitting devices (see col.8 lines 31-45). Therefore, It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the system of Peuhu et al. with the above teaching of Jacobson et al. in order to provide various sub-pixel regions correspond to varying colors display without requiring separate addressing for each of the color sub-pixel regions.

23 Claims 43-47, are rejected under 35 U.S.C. 103(a) as being unpatentable over Peuhu et al. in view of Dodabalapur et al. (US Patent 6,384,804) and further in view of Parthasarathy et al. (US Pub.2002/0176992).

Regarding claims 43-47, the modified Peuhu et al. fail to disclose the display comprises a plurality of small molecule OLEDs, polymer OLEDs, SOLEDs, TOLEDs and photodetectors.

Parthasarathy et al. disclose the display comprises a plurality of small molecule OLEDs, polymer OLEDs, SOLEDs, TOLEDs and photodetectors (see par.0014, 0045, 0055, 0059). Therefore, It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the system of Peuhu et al. and Dodabalapur et al. with the above teaching of Partgasarathy et al. in order to provide organic light

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emitting devices are comprised for several organic layers in which one of the layers is comprised of an organic LEDs to have sufficient brightness, range of color and operating lifetimes for use as a practical alternative technology to LCD-based full color flat-panel display.

24 Claims 48, are rejected under 35 U.S.C. 103(a) as being unpatentable over Peuhu et al. in view of Dodabalapur et al. (US Patent 6,384,804), in view of Parthasarathy et al. (US Pub.2002/0176992) and further in view of Matthies et al. (US Pub. 2002/0050958).

Regarding claim 48, the modified Peuhu et al. fail to disclose OLEDs form bistable pixels.

Matthies et al. disclose OLEDs form bistable pixels (see par.0038). Therefore, It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the system of Peuhu et al. with the above teaching of Matthies et al. in order to provide contrast enhancement.

25 Claims 50-51 are rejected under 35 U.S.C. 103(a) as being unpatentable over Peuhu et al. in view of Jacobsen et al. (US Pub. 2001/0017604).

Regarding claims 50-51, the Peuhu et al. fail to disclose the display comprises a display border and the video imager is integrated into the display border.

Jacobsen et al. disclose the display comprises a display border and the video imager is integrated into the display border (see par. 0153). Therefore It would have

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been obvious to one of ordinary skill in the art at the time the invention was made to modify the system of Peuhu et al. with the above teaching of Jacobsen et al. in order to provide define visual border as seen by the user through transparent window.

Allowable Subject Matter

26 Claims 15-17 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The following is a statement of reasons for the indication of allowable subject matter:

Regarding dependent claim 15, the prior arts fail to teach "where in the display is a flexible display and the communication device comprises a rod that is rotationally coupled to the housing and fixedly coupled to a first end of the display such that the display can be wound around the rod" as cited in the claim.

Conclusion

27 Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tu Nguyen whose telephone number is 571-272-7883. The examiner can normally be reached on Monday through Friday from 8:30AM-4:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, MAUNG NAY A, can be reached at 571-272-7882. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Any response to this action should be mailed to:

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Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive, Arlington, VA., Sixth Floor (Receptionist).


April 26, 2005


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